

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA**

LIGTEL COMMUNICATIONS, INC.,

Plaintiff,

v.

BAICELLS TECHNOLOGIES INC.;
BAICELLS TECHNOLOGIES NORTH AMERICA
INC.,

Defendants.

Case No. 1:20-cv-00037-HAB-SLC

**RESPONSE DECLARATION OF
JOSH WENTWORTH**

I, Josh Wentworth, declare the following: solve

1. I am the Network Operations Supervisor for LigTel Communications, Inc. In my role, I design, implement, and maintain LigTel's network infrastructure. I have been employed at LigTel for over fourteen years. I have read the declarations of Jessa DeGroote, Rick Harnish, Ronald Mao, Jesse Raasch, and Bo Wei (filed as docket entries 35-1, 35-3, 35-4, 35-5, and 35-6), filed in opposition to LigTel's motion for a preliminary injunction.

I. HNI Codes Are Six-Digits.

2. Jesse Raasch asserts that HNI/PLMN codes consist of a three digit MCC and "either a two-digit or three-digit" MNC and that together, the MCC and MNC make up the HNI/PLMN code, which "may consist of either five or six digits." Raasch Decl. ¶ 10. This is not true for HNI codes in the United States. As explained in my original declaration submitted with LigTel's Pre-Hearing Brief, ("Wentworth Decl."), HNI codes in the United States are always six digits. Wentworth Decl. ¶¶ 2, 7. I do not know and have never known of any HNI codes in the U.S. that are five digits. Wentworth Decl. ¶¶ 2, 7.

3. Raasch also asserts that Baicells has not used or directed third parties to adopt or use LigTel's HNI code. Raasch Decl. ¶ 11. This is also not true. Baicells has in fact directed its consumers to use the HNI code 31198. As I explained in my original declaration, the result is that Baicells's customers effectively use LigTel's HNI code because the numbers following 31198 are always zeros, and LigTel's authorized and assigned HNI code is 311980. Wentworth Decl. ¶ 21.

II. Baicells's Use of "31198" Has Caused Consumer Confusion.

4. Raasch states that the "difference in coding means that SIM cards utilized by the end users of Baicells networks-operator customers will not be mistakenly recognized as residing on the LigTel network..." Raasch Decl. ¶ 19. I understand Raasch to mean that customers will

not be confused by Baicells using an HNI code that appears to be LigTel's. This is not true. Baicells's use of a code that appears to be LigTel's has actually caused confusion. For example:

- a. First, Viaero Wireless was confused. As explained in my original declaration, on June 21, 2019, Jeff Brown at Viaero informed me about a possible interference caused by a carrier appearing to use LigTel's HNI code in Nebraska. Days later, on June 26, 2019, Brown let me know his company identified equipment from Sandhills Wireless, a Nebraska provider, transmitting a signal that appeared to be LigTel's signal, as it was using an IMSI which started with "311980." Brown discovered that the interference was caused by Sandhills. Viaero is the type of company that would purchase Baicells's services—Baicells sells its equipment and services to mobile operators and wireless internet services providers, like Viaero. Wentworth Decl. ¶ 19.
 - b. Second, Sandhills Wireless was confused. When I contacted Sandhills about the HNI code problem, the person at Sandhills that I spoke with told me that the HNI code used by Sandhills was "31198." Wentworth Decl. ¶¶ 19-20.
 - c. Third, New Lisbon was confused. Also as explained in my original declaration, in late June or early July 2019, I learned that New Lisbon was also using Baicells equipment. After contacting the company, New Lisbon confirmed that it was using Baicells equipment, that it was using an HNI code that appeared to be LigTel's, and that it was not aware that Baicells was not authorized to use this HNI code. Wentworth Decl. ¶ 26.
5. Raasch asserts that Baicells's HNI code is encoded differently than LigTel's HNI code, and thus its HNI code of "31198" would not be mistaken for LigTel's HNI code of "311980."

Raasch Decl. ¶¶ 18-19. Raasch conflates two different methods of reading HNI codes. The “coding” to which Raasch refers is hexadecimal coding, which is what the network uses to authenticate subscribers via the IMSI. Network authentication is performed only by the user’s home network. But LigTel is not claiming that Baicells’s use of LigTel’s HNI code causes LigTel to mistakenly authenticate Baicells end users using hexadecimal coding, or to allow Baicells end users to access LigTel’s own network. Instead, LigTel is harmed by the other actors in the marketplace who read Baicells’s HNI code as a “plain text” number: 31198. Other operators, who do not authenticate Baicells end users, see only the plain text HNI code: 31198. That is why some operators have already expressed confusion and why others are likely to be confused.

6. Accordingly, Baicells’s use of “31198” followed by a “0” appears to the world as “311980,” which is LigTel’s assigned HNI code.

7. Similarly, Raasch and Wei also misstate the problem of network interference that arose when Viaero reported that LigTel was causing network interference when in fact the interference was caused by Sandhills Wireless. Wei states that LigTel’s claim is that “Baicells’ use of the PLMN code 31198 interfered with LigTel’s use of an HNI code of 311-980.” Wei Decl. ¶ 10. Raasch states that Baicells’s use of 31198 “cannot cause interference with LigTel’s network or equipment, because SIM cards do not broadcast the PLMN.” Raasch ¶ 34. This is not how network interference works. Network interference is not caused by HNI codes, nor has LigTel ever claimed that it is. HNI codes are used to identify the source of that network interference. That is what happened here: Viaero identified LigTel as the source of interference coming from Sandhills Wireless because, at Baicells’s direction, Sandhills was using the 31198 HNI code.

8. Moreover, contrary to what Raasch states, LigTel has never claimed that Baicells has caused spectrum interference with LigTel’s own network. *See* Raasch ¶ 34. Instead, Baicells’s

equipment has caused interference with other networks, and the operators of those networks have accused LigTel of causing the interference, when it was actually Baicells customers that caused the interference. This is what happened with Viaero.

III. Ronald Mao Had Access To LigTel Trade Secrets.

9. Mao states that he did not have access to LigTel's trade secrets or proprietary information, including LigTel's encryption code, IP infrastructure, software, or systems. Mao Decl. ¶ 17. This is incorrect. Mao worked on the Huawei team that maintained and monitored LigTel's LTE core. I worked directly with Mao. I know that Mao worked on maintaining and expanding LigTel's equipment after the initial installation. Despite Mao's assertion that he did not have "access to encryption code, IP infrastructure (either physical or logical), software, or systems," I know this to be false. I was the primary employee at LigTel responsible for maintain LigTel's LTE network, which used a Huawei LTE core; I provided Huawei with the confidential and sensitive information about our network needed to configure the core. Mao had access to all of the confidential trade secrets that LigTel shared with Huawei.

10. For instance, Mao was included on emails I sent discussing the development of the LTE work and other proprietary and confidential information, including about LigTel's network design, base network infrastructure plans, and LigTel's network architecture more generally. Wentworth Ex. 8, which I sent on April 13, 2017 to Huawei employees, including Mao, is a representative example of emails I sent to Mao and Huawei containing such information.

IV. Baicells's Claimed Migration Process.

11. The Baicells representatives' discussions of the migration plan ignore some of the ongoing threats and harms that LigTel faces due to Baicells's continued use of LigTel's HNI code.

12. For instance, Harnish explained that "once Baicells completes the migration of all network operators to broadcast the new HNI/PLMN Code of 314030, there will be no risk of the sort of confusion related to spectrum inference between network operators that led" to the current dispute. Harnish Decl. ¶ 42. Raasch makes similar statements. Raasch Decl. ¶ 32. Spectrum interference is not the only harm that LigTel suffers as a result of Baicells's use of LigTel's HNI code. The other harms include: (1) that law enforcement would misidentify a Baicells end user as a LigTel customer, (2) that LigTel is unable to manage, in accordance with industry rules and standards, subscribers using its HNI code, (3) that LigTel will lose credibility in the industry because it does not comply with industry rules and standards, (4) that LigTel will not be able to negotiate favorable interoperability agreements with other providers, because of this lost credibility, and (5) that these harms will ultimately tarnish LigTel's reputation with its customers. Harnish and Raasch both ignore these harms.

13. Baicells's proposed migration plan involves broadcasting its new HNI code using its core network equipment, but existing end users will still use SIM cards that use 311980. Therefore this plan would not resolve the other harms that LigTel is suffering and may suffer. Subscribers of Baicells's customers would still appear to law enforcement and to roaming networks to be using an HNI code that appears to be LigTel's—and thus appear to be LigTel customers—because LigTel's HNI code would remain on the end user's SIM card. Accordingly, the migration plan does not solve the very real and detrimental problems regarding Baicells's continued use of LigTel's HNI code. In addition, so long as end users that are not LigTel

subscribers still have SIM cards that use 311980, LigTel will not be able to account for those subscribers. In addition, LigTel will not be able to comply with the requirements included in the IMSI guidelines, including maintaining up-to-date and accurate assignment records relating to users.

14. Harnish states that Baicells is intending to complete its migration by July 2020. Harnish Decl. ¶¶ 28, 36. Based on Baicells's past efforts to delay resolving our issues, I believe this date will not hold. Indeed, nothing is holding Baicells to this timetable. We do not have any confidence that Baicells will complete its migration by July. Moreover, Baicells could move much more quickly than it is currently planning to do. There is no technical reason that Baicells cannot migrate all of its customers immediately. If in fact Baicells's operating environment is up and running for some users, as Baicells contends, then Baicells can migrate all of its users into that environment and stop using LigTel's HNI code well before July 2020. And Baicells can execute that migration remotely, without needing to visit customers or end users. I understand that Baicells claims that it is replacing SIM cards for new customers. But Baicells could also be doing that for existing customers and appears to have no plans to do so. Baicells does not even appear to have plans to replace the SIM cards for existing customers over time, or in piecemeal fashion as it is able. Based on my understanding of the Baicells migration plan, Baicells is not planning to replace any SIM cards at all.

15. Raasch also stated that he expects all operators will complete the "eNodeB software upgrade by July 2020." Raasch Decl. ¶ 31. Based on Baicells's past efforts to delay resolving our issues, I believe this date will not hold. Indeed, nothing is holding Baicells to this timetable. We do not have any confidence that Baicells will complete this upgrade by July.

V. Baicells's Mischaracterizations of the July 29, 2019 Baicells LigTel Meeting

16. Wei made asserts that, during the meeting, he claimed that there was no interference because Baicells's HNI of 31198 is not the same as LigTel's HNI code of 311-980. Wei Decl. ¶¶ 10-11. Wei did claim this, but as explained above, and in my previous declaration, there had already been instances of confusion.

17. Wei also misstates LigTel's complaint. Wei states that LigTel's claim is that "Baicells's use of the PLMN code 31198 interfered with LigTel's use of an HNI code 311-980." Wei Decl. ¶ 10. But LigTel's complaint about interference is that other networks will use the HNI code to identify LigTel as the *source* of interference. HNI codes themselves do not cause interference.

18. Wei also denies that he stated to have Mao "get into" LigTel's Huawei-manufactured core and reprogram it. Wei Decl. ¶ 18. This is not true. After Wei and Mead spoke privately, Wei informed the group that he could have Mao "get into" our Huawei-manufactured core and reprogram it himself.

19. Following the meeting, Mead and I discussed the private conversation between Mead and Wei and Wei's statement about Mao. I confirmed to Mead that I had communications with Mao during LigTel's core upgrade and that Mao was given information about our network and how to access our core so that he could perform the work he was doing for Huawei. We understood Wei's words to mean that Mao's knowledge of our network and core could allow him to "get in" without our approval.

20. I still understand Wei's offer to mean that Baicells could have the ability to access LigTel's network and reprogram LigTel's core.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 9, 2020



Josh Wentworth